

# Clear Blue Smart Off-Grid Controller

## For Solar and Wind Powered Systems

The Clear Blue Controller provides excellent energy generation and control with high reliability, easy installation and full remote management and control over the Internet of solar or wind/solar powered lighting and security systems. The Clear Blue system includes the smart controller, the communications network and the Horizon Cloud monitoring, control and alarm system.



### *Real Time Intelligence over the Internet*

- Configuration, multiple lighting profiles, power optimization all done remotely via PC or smartphone.
- Motion detection can be enabled remotely in all 4 adjustable light profile stages. Real time event settings combined with motion detection ensures the required light at the right time, while optimizing system availability and cycle life of the system.
- Customizable system alarms, weather data history and multi-level reporting provide unmatched intelligence.

### *Remote and Proactive Maintainability*

- Full remote control and monitoring of all system components via PC or smartphone using Clear Blue's Cloud software, Horizon. Functions include ability to check solar panel, perform short circuit test, adjust battery level, reboot system remotely.
- Proactive versus reactive maintenance can determine when batteries or solar panels need to be replaced.
- Remote troubleshooting and control slashes maintenance time and cost.

### *Reliability and Optimized Performance*

- Individual systems are managed to deliver 100% up time with site specific solar and wind performance.
- Maximum battery life ensured through optimized charge profiles and life cycle management.
- Short circuit protection.
- Ability to overprovision to maximum of 40A peak of solar capacity ensures power on cloudy days.

**Powerful Control. In the Cloud & Off the Grid.**

## Technical Data

	Solar Only	Hybrid
Rated Battery Voltage	12V / 24V	
Rated Solar Power	Solar 1 & Solar 2 500W / 20A each, 20 amps max to the battery	
Rated Wind Turbine Power	3 phase AC or DC, 600W 24V AC nominal	
Wind Turbine Voltage		
Wind Turbine Max I/P Power	1000W	
Communications	Built-in pre-configured communications, streams data automatically to Horizon cloud. Options for Mesh, 3G Cellular, WiFi. Supported in over 170 countries.	
Device LEDs	Solar 1 & 2, Battery, Load 1 & 2 Wind, Power, Communications Activity	
Load	Maximum rated 480W. Superior load control through dimming and motion detection.	
Motion Detection Option	Motion detection can be enabled in all 4 adjustable light profile stages. Motion light levels can be adjusted remotely with Horizon. Real time event settings combined with motion detection ensures the right amount of light at the right time, while optimizing system availability and cycle life of the system.	
Dimming Control	Dimming controls are 0-10v, 0-5v, PWM signal and PWM power. These profiles can be remotely upgraded to meet most LED light manufacturers, allowing replacement or upgrade of LED lights on the fly.	
Monitoring Sensors	Voltage/current for all inputs Battery temperature (optional) Open door switch (optional) Anemometer / wind direction	
Connectors/Wiring Harness	Color coded and keyed quick connects make installation foolproof and easy. Integrated cable harness. Anderson, Molex and RJ11 connectors. Gasketed sealed plastic enclosure ensures no water penetration from any point.	
Light Profiles	Profiles can be remotely changed in real time, using the Horizon cloud service, with full customization of dimming / time settings	
Protection	Redundant protection for reverse connections, battery overcharge, over discharge and temperature compensation. Overload protection, short circuit, and low voltage disconnect.	
Remote Control	All settings remotely managed by Horizon's cloud service, including remote monitoring and troubleshooting.	
Dimensions	18cm x 12 cm x 6cm	